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EXAMINER

PRIETO, BEATRIZ

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2142

DATE MAILED: 09/15/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/513,015

Applicant(s)

BLOCK ET AL

Examiner

B. Prieto

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

1. This communication is in response to amendment filed 06/24/03, claims 1-8 and 14-25 remain pending and are hereby set forth for examination.
2. Formal Drawings filed 06/24/03 have been approved by Draftsperson.
3. **SECOND NOTICE:** It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/063,335, filed 04/20/98 and others on page 11 without an Application Number. A reference to the prior application must be inserted as the first sentence of the specification of this application or in an application data sheet (37 CFR 1.76) if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. Also, the current status of all nonprovisional parent applications referenced should be included. In this case above-mentioned application's updated status is abandoned as of 01/27/01.
4. **SECOND NOTICE:** The use of the trademarks, e.g. SPARCTM or PENTIUM^{RTM} manufactured by Sun Microsystems, and Intel Corp., respectively etc. has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.
5. Claims 2 and 7 recites the limitation "said unit" and "said server" in their respective first limitations. There is insufficient antecedent basis for this limitation in the claim. Claims 2 and 7 will be treated as an amended claim.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8, and 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBettencourt et. al. (DeBettencourt) U.S. Patent No. 6,279,001 in view of About clustering technology in WebLogic BEA WebLogic Server, 08/1999, pages 1-7, hereafter referred to as BEA.

Regarding claim 1,

client initiating a communication between a client unit and a first server via an established connection that supports said communication (col 4/lines 35-46, browser operated by an user or a computer makes request using a protocol that supports the query or a communication with a server, request is received by component 120, col 6/lines 54-59, i.e. a connection was established) or

initiating a connection between a client unit and an appropriate first server (100) (col 6/lines 54-62: redirect request from client, col 7/lines 3-18: client redirected to another server, col 7/lines 52-col 8/line 5: using the network address/port endpoint secure communication used of the appropriate first server and redirection information, col 5/lines 50-56: network address/port referred as endpoint is used to establish a network connection between the endpoints, col 21/lines 60-col 22/line 36: initiate communication point-to-point communication between components) by an interceptor (120) residing on a session manager (110) (col 6/lines 39-43, col 7/lines 27-34) or on another computer or server (col 7/lines 27-34);

determining at said first server a location of a service ("session") on one of said plurality of servers (col 7/lines 52-col 8/lines 5: determining using information about each application, a list of web server that can provide the requested application and their respective availability/enableness and addresses thereby directing user request to appropriate server); and

redirecting said client unit via said first server to a second server having said service ("session") (col 6/lines 54-63: redirect, col 8/lines 16-18: redirect or refers, col 7/lines 43-47: redirect).

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however the above-mentioned prior art does not explicitly teach where a plurality of servers exchange information among themselves;

Bea teach a groups of interdependent servers, ("WebLogic Clusters") (Introduction section on page 1), mirror data and/or state information from one to another (Replication and clustering section on page 3, 1st para.) data associated with an user session is propagated (and updates) to secondary server (page 3, 3rd para.), including replicating internal state of an object associated with an user session (page 3, 7-10th para.) and user data in order to maintain stateful service (persistent and clustering section on page 4);

It would have been obvious to one ordinary skilled in the art at the time the invention was made given DeBettencourt's suggestion of the importance of storing session information associated with an active user, to utilize Bea's teachings for plurality of servers exchange information among themselves, such as application services and internal state information, motivation would be to provide availability and fault-tolerant services increase time response and throughput.

Regarding claim 2, said client unit broadcasting a message to said plurality of server; and said first server responding to said message; Bea teach wherein server may use an IP switchover mechanism to allow client to find a replacement server for a failed server, the mechanism requires the support of DHCP (clustering architectures on page 2). DHCP is a well known¹ protocol to provides a client (via a broadcast request, known and "DHCPDISCOVER" message) information including an server address from which the client can obtain server services, upon a server response to the request.

Regarding claim 3, said initiating is in response to a server failing (DeBettencourt: failed: col 21/lines 29-41, server failure, server not enabled; col 7/lines 35-42, not running: col 7/lines 65-67, available: col 12/lines 66-67, operation status; col 15/lines 43-55); Bea teach wherein server may use an IP switchover mechanism to allow client to find a replacement server for a failed server, the mechanism requires the support of DHCP (clustering architectures on page 2). DHCP is a well-known protocol to provides a client (via a broadcast request, known and "DHCPDISCOVER" message) information including an server address from which the client can obtain server services, upon a server response to the request.

Regarding claim 4, said service ("session") is associated with a identifier ("token") (DeBettencourt; table 3, item 21, col 5/lines 25-36).

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Regarding claim 5, said first server sending a message to said plurality of servers (DeBettencourt: col 9/lines 45-47, col 9/lines 56-61), said message comprising said token (DeBettencourt: table 3); and said plurality of server responding to said first server with service or application ("session") information associated with said token (col 5/lines 25-39, col 7/lines 16-18).

Regarding claim 6, determining a most recent service or application related information ("session") from a plurality of sessions (DeBettencourt: col 5/lines 20-39, recent/latest information col 8/lines 16-18).

Regarding claim 7, securing messages between said client unit and said plurality of servers (DeBettencourt: col 7/lines 56-61, table 3).

Regarding claim 8, however the above mention prior do not explicitly teach wherein securing is performed with a keyed hash signature;

Official Notice (see MPEP § 2144.03 Reliance on "Well Known" Prior Art) is taken that keyed hash signature was old and well known in the Data Processing art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include this feature because it is a common authentication scheme which employs authentication tokens to improved security system against eavesdropping, dictionary attacks, and intrusion into stored password lists.

Regarding claim 14, wherein said session comprises a plurality of services (DeBettencourt, session: col 4/lines 35-46, session; col 5/lines 25-39) and wherein said first and second servers can each provide said plurality of services (DeBettencourt, col 4/lines 12-21, col 5/lines 1-8).

Regarding claim 15, wherein said plurality of services comprise information ("state maintenances") for a user of said client unit (DeBettencourt: col 4/lines 12-21, 35-46, col 5/lines 1-8, 25-39).

Regarding claim 16, removing a service ("plurality of computational services") from said client unit availability or access (Bea: Internal cluster commands from one server to another may initiate some action, e.g. going offline for maintenance, section How clusters are connected on page 4);

providing said plurality of computational servers by said second server to a user of said client unit via said session (Bea; replacement server section clustering architecture on page 2);

wherein said plurality of computational services comprise state related information ("state maintenances") for said user of said client unit (Bea: Introduction section on page 1), mirror data and/or

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state information from one to another (Replication and clustering section on page 3, 1st para.) data associated with an user session is propagated (and updates) to secondary server (page 3, 3rd para.), including replicating internal state of an object associated with an user session (page 3, 7-10th para.) and user data in order to maintain stateful component (persistent and clustering section on page 4);.

Regarding claim 17, wherein said information exchanged between said plurality of servers comprises a description of a network topology of said plurality of servers (Bea: awareness of the server application that form the cluster via an internal management cluster function such as heartbeat, application commands, internal cluster commands and data replication among server, How cluster are connected, page 4).

Regarding claim 18, updating status in said network topology on a relationship between a connectivity of said client unit and said second server (Bea: awareness of the server application operations detection failover via heartbeats (i.e. periodically transmitted messages) detect a failed server ("failover") therefore lost of connectivity between the clients that where services by the failed server, How cluster are connected, page 4).

Regarding claim 19, wherein said second server comprises a server available for having said session (Bea: replacement with an available server including failover topologies, page 2, server having session information among data that is mirrored, page 3, replication discussed above).

Regarding claim 20, wherein said client unit comprises a computer ("thin client unit") (DeBettencourt: browser/computer, col 4/lines 35-46).

Regarding claim 21, wherein said session comprises a ("thin client") client session (DeBettencourt: session: col 4/lines 35-46, session; col 5/lines 25-39, servers provide said plurality of services via a session, col 4/lines 12-21, col 5/lines 1-8).

Regarding claim 22, maintaining said session persistently by said plurality of servers (Bea: Persistence and clustering section on page 4).

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Regarding claim 23, wherein said client unit comprises a ("stateless") device (e.g. a computer) (DeBettencourt, browser/computer: col 4/lines 35-46).

Regarding claim 24, wherein said determining said location at said first server of said session on one of said plurality of servers comprises receiving a message from said second server of an availability of said second server for having said session (Bea: cluster internal communication supports servers sending messages indicating their availability via heartbeat and session information via replication of internal data, application commands and replicate application data, How cluster are connected, page 4).

Regarding claim 25, wherein said token can identify a plurality of sessions (DeBettencourt: (DeBettencourt; table 3, item 21, col 5/lines 25-36).

Citation of Pertinent Art:

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; Copies of documents cited will be provided as set forth in MPEP§ 707.05(a):

Network Working Group, Request for Comments (1541 and 1531): DYNAMIC HOST CONFIGURATION PROTOCOL, Droms, R., 10/1993, pages 1-39.

DHCP provides a framework for passing configuration information to hosts including adding the capability of automatic allocation of network addresses (abstract); other protocols such as the Reverse Address Resolution Protocol (RARP) explicitly addresses the problem of network address discovery, 1. The client broadcasts a DHCPDISCOVER message on its local physical subnet on to DHCP servers not on the same physical subnet. Each server may respond (unicast or broadcast) with a DHCPOFFER message that includes an available IP network address and server address. The client receives one or more DHCPOFFER messages from one or more servers. The client may choose a responses from one server and contact the selected server via an DHCPREQUEST message including the 'server identifier' option to indicate which server it has selected (pages 12-13).

Response to arguments

8. Applicant argues instant invention is patentably distinguishable over the Peacock reference because the present invention solves a different problem, wherein a server communicate with each other in a self-organizing manner with no master component, and hence no single point of failure, wherein a client only seeks to connect to any one of the available server, further wherein if no session exists, then one is created and the client device is redirected to the newly created session, if a plurality of user sessions exist, the client device is redirected to connect to the most recently accesses session.

In response to the above argument applicant's interpretation of the prior art reference is noted, however, the features upon which applicant relies (i.e., "servers communicate with each other in a self-organizing manner with no master component, and hence no single point of failure, wherein a client only seeks to connect to any one of the available server, wherein if no session exists, then one is created and the client device is redirected to the newly created session, if a plurality of user sessions exist, the client device is redirected to connect to the most recently accesses session") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

9. Applicant argues instant invention is patentable distinguishable over the DeBettencourt because this reference teaches the use of a manager or interceptor component, which represent a single point of failure, however instant invention does not have a manager or interceptor nor a single point of failure because the servers are self-organizing, with no master component and does not require a configuration database.

In response to the above argument applicant's interpretation of the prior art reference is noted, however, the features upon which applicant relies (i.e., "servers communicate with each other in a self-organizing manner with no master or interceptor component, and hence no single point of failure and does not require a configuration database") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. Applicant argues prior art does not teach claim limitation as amended.

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In response to the above argument, claim as amended has been retreated and prior art applied, applicant is referred to the above rejection. Applicant's arguments with respect to claims as amended have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant argues prior art does not teach claim 4, wherein DeBettencourt does not disclose or suggest that redirection to a particular web server is based on a "token" associated with a web transaction or a user state used to select a particular web server.

In response to the above argument, claims 1-25 have been review, however a limitation reading, redirecting to a particular web server is based on a "token" associated with a web transaction or a user state used to select a particular web server, is not found. The features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant's arguments have been fully considered but not found persuasive, rejection is maintained.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Prosecution of this application is closed by means of this final office action § 1.113, applicant may request continued examination of the application by filing a Request for Continued Examination of under 37 CFR § 1.114 and providing the corresponding fee set forth in § 1.17(e) for the submission of, but not limited to, new arguments, an information disclosure statement, an amendment to the written description, claims, drawings, or new evidence in support of patentability. Or applicant whose claims has

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been twice rejected, may appeal from the decision of the administrative patent judge to the Board of Patent Appeals and Interferences under 35 U.S.C. §134.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Mark R. Powell can be reached on (703) 305-9703. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this final action should be mailed to:

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(703) 746-7238 for TC 2100 Official After-final communications; please mark "EXPEDITED PROCEDURE", and
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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

B. Prieto
Patent Examiner


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